What is claimed is:

1. A composition useful for treatment of microbial organisms comprising

a targeting moiety and

an anti-microbial peptide moiety,

wherein the targeting moiety is coupled to the anti-microbial peptide moiety and recognizes a target microbial organism and wherein the composition has an anti-microbial effect on the target microbial organism.

2. The composition of claim 1, wherein the targeting moiety is a peptide.

3. The composition of claim 2, wherein the targeting moiety is coupled to the anti-microbial peptide moiety via a peptide linker.

4. The composition of claim 1, wherein the targeting moiety is a minibody.

5. The composition of claim 1, wherein the targeting moiety is selected from a group consisting of a scFv, minibody, Di-miniantibody, Tetra-miniantibody, $(scFv)_2$, Diabody, scDiabody, Triabody, Tetrabody, and Tandem diabody.

6. The composition of claim 1, wherein the targeting moiety comprises all or a portion of a variable region of an antibody.

7. The composition of claim 6, wherein the antibody is a monoclonal antibody specific to *S.* mutans.

8. The composition of claim 7, wherein the antibody is selected from the group consisting of SWLA1, SWLA2, and SWLA3.

9. The composition of claim 1, wherein the targeting moiety comprises a variable region of a light chain and a variable region of a heavy chain of an antibody.

10. The composition of claim 9, wherein the targeting moiety further comprises a constant domain.

11. The composition of claim 10, wherein the constant domain is connected to the variable region of the heavy chain by a peptide linker.

12. The composition of claim 10 comprises a dimer, wherein each monomer of the dimer comprises a fusion polypeptide containing the targeting moiety and the anti-microbial peptide moiety.

13. The composition of claim 1, wherein the targeting moiety is a ligand to a receptor of the target microbial organism.

14. The composition of claim 1, wherein the anti-microbial peptide moiety comprises a peptide selected from the group consisting of alexomycin, andropin, apidaecin, bacteriocin, β-pleated sheet bacteriocin, bactenecin, buforin, cathelicidin, α-helical clavanin, cecropin, dodecapeptide, defensin, β-defensin, α-defensin, gaegurin, histatin, indolicidin, magainin, nisin, protegrin, ranalexin, and tachyplesin.

15. The composition of claim 1, wherein the anti-microbial peptide moiety comprises histatin 5.

16. The composition of claim 1, wherein the anti-microbial peptide moiety comprises a peptide comprising an amino acid sequence as shown in SEQ ID NO. 2.

17. The composition of claim 1, wherein the anti-microbial peptide moiety comprises dhvar1.

18. The composition of claim 1, wherein the anti-microbial peptide moiety comprises a peptide comprising an amino acid sequence as shown in SEQ ID NO. 6.

19. The composition of claim 1, wherein the anti-microbial peptide moiety comprises protegrin PG-1.

20. The composition of claim 1, wherein the anti-microbial peptide moiety comprises a peptide comprising an amino acid sequence as shown in SEQ ID NO. 15.

21. The composition of claim 1, wherein the anti-microbial peptide moiety comprises Novispirin G10.

22. The composition of claim 1, wherein the anti-microbial peptide moiety comprises a peptide comprising an amino acid sequence as shown in SEQ ID NO. 17.

23. The composition of claim 1, wherein the target microbial organism is selected from the group consisting of bacteria, ricketsia, fungi, yeasts, protozoa, and parasites.

24. The composition of claim 1, wherein the target microbial organism is a cariogenic organism.

25. The composition of claim 1, wherein the target microbial organism is *Streptococcus mutans*.

26. The composition of claim 25, wherein the anti-microbial peptide moiety comprises a peptide selected from the group consisting of histatin 5, dhvar 1, protegrin PG-1, and Novispirin G10.

27. The composition of claim 1, wherein the target microbial organism is selected from the group consisting of *Escherichia coli, Shigella dysenteriae, Salmonella typhimurium,Streptococcus pneumoniae,Staphylococcus aureus*, and *Pseudomonas aeruginosa*.

28. The composition of claim 27, wherein the anti-microbial peptide moiety comprises a peptide selected from the group consisting of buforin, cecropin, indolicidin, and nisin.

29. The composition of claim 1, wherein the target microbial organism is selected from the group consisting of *Escherichia coli, Shigella dysenteriae, Salmonella typhimurium, Streptococcus pneumoniae, Staphylococcus aureus, Pseudomonas aeruginosa, Candida albicans, Cryptococcus neoformans, Candida krusei, and Helicobacter pylori.*

30. The composition of claim 29, wherein the anti-microbial peptide moiety comprises a peptide selected from the group consisting of magainin and renalexin.

31. The composition of claim 1, wherein the target microbial organism is *herpes simplex virus* and the anti-microbial peptide moiety comprises a peptide of magainin.

32. The composition of claim 1, wherein the target microbial organism is selected from the group consisting of *Streptococcus mutans, Neisseria gonorrhoeae, Chlamydia trachomatis,*and *Haemophilius ducreyi* and wherein the anti-microbial peptide moiety comprises a peptide of protegrin.

33. The composition of claim 1, wherein the target microbial organism is selected from the group consisting of *Camphylobacter jejuni, Moraxella catarrhalis*, and *Haemophilius influenzae* and wherein the anti-microbial peptide moiety comprises a peptide of alexomycin.

34. The composition of claim 1, wherein the target microbial organism is *Streptococcus pneumoniae* and the anti-microbial peptide moiety is selected from the group consisting of defensin, α defensin and β pleated sheet defensin.

35. A method of treating a target microbial organism infection comprising administering to a subject in need of such treatment an effective amount of the composition of claim 1.

36. The method of claim 35, wherein the target microbial organism infection is on a mucosal surface.

37. The method of claim 36, wherein the mucosal surface is selected from the group consisting of mouth, vagina, gastrointestinal tract, and esophageal tract.

38. The method of claim 35, wherein the target microbial organism infection is a S. mutans infection in a mouth.

39. The method of claim 38 comprising administering to a subject in need of such treatment an effective amount of the composition of claim 5.

40. The method of claim 38 comprising administering to a subject in need of such treatment an effective amount of the composition of claim 6.

41. The method of claim 38 comprising administering to a subject in need of such treatment an effective amount of the composition of claim 8.

42. The method of claim 38 comprising administering to a subject in need of such treatment an effective amount of the composition of claim 12.

43. The method of claim 37, wherein the target microbial organism infection is a *Candida albicans* infection in vagina.

44. The method of claim 37, wherein the target microbial organism infection is an infection in gastrointestinal tract selected from the group consisting of a *Helicobacter pylori* infection, *Campylobacter jerjuni* infection, *Vibrio cholerae* infection, salmonella infection, Shigella infection, and *Escherichia coli* infection.

45. The method of claim 37, wherein the target microbial organism infection is an oral infection selected from the group consisting of *porphyromonas gingivalis,* Actinomyces, Veillonella spirochetes, and gram-negative flora infection.

46. The method of claim 37, wherein the target microbial organism infection is an *Clostridium difficile* infection in gastrointestinal tract or esophageal tract.

47. A method of making the composition of claim 1 comprising using an expression construct containing a sequence encoding the targeting moiety, the anti-microbial peptide moiety, pheromon factor α, intein, and chitin binding domain.

48. A method of making the composition of claim 2 comprising using an expression construct containing a sequence encoding the targeting moiety, the anti-microbial peptide moiety, pheromon factor α, intein, and chitin binding domain.